National Search and Rescue Secretariat

New SAR Initiatives Fund (NIF) Final Report 2000 - 2001

Issued under the authority of the:

National Search and Rescue Secretariat
275 Slater Street, 4th floor
Ottawa, ON K1A 0K2
Tel.: (613) 996-1616
1 800 727-9414
Fax: (613) 996-3746
Web site: http://www.nss.gc.ca

February 2002

Aussi disponible en français

TABLE OF CONTENTS

Executive Summary 1
Special Thanks 2
Acronyms and Abbreviations 3

ENVIRONMENT CANADA (METEOROLOGICAL SERVICE OF CANADA)

Plastic/Composite Hull Buoy Development and Deployment 5
Wind and Wave Forecasting on the Great Lakes 6
Plastic/Composite Hull and Payload Purchase and Deployment 7
Weather/Data Site – Wreckhouse, Newfoundland 8
Weather Station – Grand Manan Island, New Brunswick 9

DEPARTMENT OF FISHERIES AND OCEANS (CAN ADIAN COAST GUARD)

School Campaign on Boating Prevention 11
Operational Guidelines for Volunteer SAR Units and the Inshore Rescue Boat Program 12
Production of Current Field Using SLDMB's to Improve SAR Planning 13
Education and Awareness on Interior Lakes*
Small Craft GMDSS Training*
Boating Rescue Pilot Project – Laurentian Region 14
Saved by the Jacket 15

DEPARTMENT OF NATIONAL DEFENCE (CANADIAN FORCES)

Image Generator for SAR Helicopters *
Infrared Eye: Airborne Prototype 17
Intravenous Warming Set 18
442 Squadron Sequence Interoperability SAR FM Radio 19
Rescue Hoist Quick Splice for "Sea King" Helicopter 20
CASARA L-Helpers with Antenna 21
Sensor Pod Installation for SARPAL 22
Aircraft Icing Model Update 23
An Advisor Tool for Optimal Inland Air Search Planning 24
Limb Cooling and Performance Decrements 25
Maritime Helicopter Rescue Mannequin 26
CASARA First Aid Kits 27
SAR Noise Canceller Field Trial 28
Autonomous Liferaft for SARPAL 29
Hypothermia Casualty Evacuation Bags 30
Helicopter Rescue Baskets 31

103-05292/

TABLE OF CONTENTS

PARKS CANADA AGENCY

Risk Management Initiative – Rediscovery International Foundation 33
Enhancing and Linking the Volunteer Amateur Radio Network – Bay of Fundy, NB 34
Improve and Expand Water/Ice SAR – Rideau Canal, ON 35

ROYAL CANADIAN MOUNTED POLICE

SARVAC SAR Prevention Program 37

BRITISH COLUMBIA

Communication Upgrade – Penticton, BC and Region 39

NORTHWEST TERRITORIES

Underwater Dive Rescue – Yellowknife, NWT 41

ONTARIO

Marine Unit Enhancement 43
Wilderness Training Institute: An Education Program in Prevention 44
Air Service and Emergency Response – Ottawa-Carleton Regional Police 45

QUEBEC

Creating the Basis for a Volunteer GSAR Structure – QC 47

Conclusion 48

Total projects: **35**
* Not Available

Executive Summary

The New SAR Initiatives Fund (NIF) was established by the federal government in 1988 to provide funding for projects that would enhance search and rescue in Canada. The NIF is managed by the National Search and Rescue Secretariat (NSS), on behalf of the Lead Minister for Search and Rescue.

NIF proposals are submitted to the NSS for review by an authorized NIF federal or provincial/territorial sponsoring organization. Proposals are reviewed by the NSS and evaluated based on their merit by the Interdepartmental Committee on Search and Rescue (ICSAR). The proposals are then ranked in order of merit and are funded in order of merit based on the availability of funds.

The NIF provides annual funding for new and continuing projects that address at least one of the following six categories:

- Integration of the National Search and Rescue Program (NSP)
- Collection of Search and Rescue (SAR) Data
- SAR Prevention
- Research and Development (R & D)
- Volunteers
- Response

Of the 35 projects that were completed and are described in this report, 17 are *Response*; 12 are *Prevention*; 4 are *Research and Development*; and 2 are *Volunteers*. However, many projects fall under more than one category.

In the spirit of the *Results for Canadians* document (Treasury Board Secretariat, 2001) this report attempts to inform the Canadian public, other federal government departments, and all other levels of government in Canada about the initiatives and results of the New SAR Initiatives Fund (NIF) Program for fiscal year 2000/2001. A brief summary of the accomplishments of NIF projects that were completed during fiscal year 2000/2001 demonstrates the cost of initiatives and their impacts on Search and Rescue activities in Canada to assure the taxpayer that funds have been well spent.

To serve NSS clients better by ensuring that government program reports are easily accessible to everyone, this document is available both in .pdf format from the NSS website (www.nss.gc.ca) and in print format by contacting the NSS.

For further information regarding the New SAR Initiatives Fund Program or this document, please contact the National Search and Rescue Secretariat at 1-800-727-9414 or NIF@nss.gc.ca.

For further information regarding a specific NIF project, please contact one of the project contacts listed at the bottom of the project summary page.

Special thanks to all NIF Sponsors and Project Partners

NIF Sponsors ***(NIF Sponsors are those NSS approved organizations who act as the link between the NSS and the project, and assist the NSS in the management of the NIF. Sponsors are listed in alphabetical order)*****:**

Environment Canada (Meteorological Service of Canada)
Department of Fisheries and Oceans (Canadian Coast Guard)
Department of National Defence (Canadian Forces)
Parks Canada Agency
Royal Canadian Mounted Police
Transport Canada
Alberta Disaster Services
British Columbia Provincial Emergency Program (BC PEP)
Manitoba Emergency Management Organization
New Brunswick Emergency Measures Organization
Newfoundland Department of Justice
Nova Scotia Emergency Measures Organization
Nunavut Emergency Services
Northwest Territories Emergency Services Division
Emergency Measures Ontario
Prince Edward Island Emergency Measures Organization
Sûreté du Québec
Saskatchewan Emergency Planning
Yukon Emergency Measures Organization

2000/2001 NIF Project Partners ***(key organizations contributing to projects)*****:**

Canadian Air Search and Rescue Association (CASARA)
City of Yellowknife Emergency Response Team
Kingston Fire Department
Ottawa-Carleton Regional Police Service
Rediscovery International Foundation
Search and Rescue Volunteer Association of Canada (SARVAC)

Acronyms and Abbreviations

The following is a list of commonly used acronyms and abbreviations used in this report:

TERMINOLOGY

CCGA – Canadian Coast Guard Auxiliary
GPS – Global Positioning System
GSAR – Ground Search and Rescue
JRCC – Joint Rescue Coordination Centre (formerly RCC – Rescue Coordination Centre)
NIF – New SAR Initiatives Fund
NSP – National SAR Program
PFD – Personal Flotation Device
PEP – Provincial Emergency Program
PSAs – Public Service Announcements
R & D – Research and Development
SAR – Search and Rescue
SLDMB - Self Locating Datum Marker Buoy

SPONSORING ORGANIZATIONS

Federal:
EC (MSC) – Environment Canada (Meteorological Service of Canada)
DFO (CCG) – Department of Fisheries and Oceans (Canadian Coast Guard)
DND (CF) – Department of National Defence (Canadian Forces)
PC – Parks Canada Agency
RCMP – Royal Canadian Mounted Police

Provincial/Territorial:
BC – British Columbia
NWT – Northwest Territories
ON – Ontario
QC – Quebec

ENVIRONMENT CANADA
(METEOROLOGICAL SERVICE OF CANADA)

New SAR Initiatives Fund- Final Report FY 2000/2001

Plastic/Composite Hull Buoy Development and Deployment

Financial Summary			
FY 98/99:	$ 436,000	**NIFID #:**	98009
FY 99/00:	$ 378,000	**Project #:**	EC 4/98
FY 00/01:	$ 22,000	**Category:**	Response
Total exp.:	**$ 836,000**	**Sponsor:**	EC (MSC)

This project was sponsored by Environment Canada (Meteorological Service of Canada) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1998/1999 to 2000/2001.

The objective of the *Plastic/Composite Hull Buoy Development and Deployment* project was to improve the marine database used to write marine forecasts for large bodies of water adjacent to the Great Lakes (i.e. Lake of the Woods, Lake St. Clair, and the Southern Basin of Lake Huron). These areas represent locations where meteorological data was previously sparse and where large service vessels were not available. To accomplish this, nine weather buoys were developed and six were deployed (three held in reserve). In order to ensure that the network of six buoys was always operational during the marine recreational boating season, a spare buoy was required for every two operational buoys.

Weather buoys were placed in: Lake of the Woods; North Channel (between Manitoulin Island and the mainland); Lake Nipissing; Lake Simcoe; Lake St. Clair; and Southern Lake Huron (Bayfield). The buoy platform was equipped to measure: air/water temperature; atmospheric pressure; wind speed/direction; and period and height of waves. This data was then transmitted hourly via satellite to the marine database, where it was used to compile accurate and timely marine weather forecasts.

The Canadian Coast Guard (Kenora, Parry Sound, and Amherstburg), Department of Fisheries and Oceans, and Parks Canada (Ontario Region) were all involved in communication activities during this project.

The weather buoys have been transmitting timely and accurate data. Additional buoys have been requested by the Prairie and Northern Regions of the Meteorological Service of Canada. The data is also available on the Internet to selected users, and will be open to public access shortly. With this real-time data, weather forecasts can be issued to the recreational boating community and boaters will be able to make more informed decisions.

Deliverables

- 9 Weather Buoys
- Various News Releases

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Ron Fordyce
Port Meteorological Office
100 East Port Blvd.
Hamilton, ON L8H 7S4
Tel.: 905-312-0900/0933
Fax: 905-312-0730
Email : ron.fordyce@ec.gc.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Wind and Wave Forecasting on the Great Lakes

Financial Summary			
FY 99/00:	$ 71,500	**NIFID #:**	99034
FY 00/01:	$ 71,500	**Project #:**	EC 3/99
Total exp.:	**$ 143,000**	**Category:**	Prevention
		Sponsor:	EC (MSC)

This project was sponsored by Environment Canada (Meteorological Service of Canada) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1999/2000 to 2000/2001.

The objective of this project was to improve wave condition forecasts on the Great Lakes by developing a tool to increase the reliability of information available to commercial and recreational boaters. To accomplish this, the WAM ocean wave model (a state-of-the-art third generation wave model) was adapted for use on the Great Lakes, including a shallow water version specifically for Lake Erie.

The wave model's performance was tested and evaluated through comparisons with actual observations and outputs from other predictive techniques and was proven to be superior to previous forecasting techniques. Operational forecast models are required to have greater than 99 per cent reliability before they can be implemented. The LAKWAM program is going through the process of adaptation from research mode to operational. Upon implementation, output data will be used by forecasters in the Thunder Bay (Ontario) Regional Weather Centre (marine forecast centre for the Great Lakes).

The improvement in wave forecasts will result in better decision-making by boaters on the Great Lakes as to when and where they may safely conduct their activities as well as reducing the risk of SAR incidents on the Great Lakes.

Deliverables

- Adapted WAM ocean wave model
- "Wind Wave Forecasting on the Great Lakes – Scientific report"

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
J. Carr McLeod
Environment Canada – Ontario Region
4905 Dufferin Street
2nd Floor North
Downsview, ON M3H 5T4
Tel.: 416-739-4536
Fax: 416-739-4721
Email : carr.mcleod@ec.gc.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Plastic/Composite Hull and Payload Purchase and Deployment

Financial Summary			
FY 99/00:	$ 182,000	**NIFID #:**	99035
FY 00/01:	$ 170,000	**Project #:**	EC 7/99
Total exp.:	**$ 352,000**	**Category:**	Prevention
		Sponsor:	EC (MSC)

This project was sponsored by Environment Canada (Meteorological Service of Canada) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1999/2000 to 2000/2001.

The objective of this project was to provide more accurate marine weather forecasts and timely severe weather warnings on lakes in the Prairie and Northern Regions of the Meteorological Service of Canada by obtaining a new series of weather buoys that provided mid-lake wind, wave and temperature information. This project was the result of a previously funded NIF project (see page 5). Four (4) weather buoys were purchased and deployed in Lake Winnipeg (one in the south basin and one mid-lake), Great Slave Lake, and Hudson's Bay.

Benefits of this project were assessed by gathering feedback from various users of the data from the new weather buoys. The users, who included recreational boaters, commercial fishers the marine weather forecast office and local Canadian Coast Guard personnel, concluded that data from the buoys was very valuable and gave them more real-time awareness of lake conditions.

This increase in awareness enables users to make more informed decisions on whether to proceed onto the lake and decreases the likelihood of users getting caught on the lake in bad conditions, thus resulting in a reduced risk of SAR incidents.

Deliverables

- 4 Weather Buoys
- "Oh Buoy! Weather forecaster means smooth sailing" – Article

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Barry Funk
Environment Canada
123 Main Street, Suite 150
Winnipeg, MB R3C 4W2
Tel.: 204-984-2018
Fax: 204-984-2072
Email : barry.funk@ec.gc.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Weather Data Site - Wreckhouse, Newfoundland

Financial Summary			
FY 00/01:	$ 43,400	**NIFID #:**	2000038
Total exp.:	**$ 43,400**	**Project #:**	EC 4/00
		Category:	Prevention
		Sponsor:	EC (MSC)

This project was sponsored by Environment Canada (Meteorological Service of Canada) and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of the *Weather Data Site* project in Wreckhouse, Newfoundland was to install an automatic weather station to monitor and report wind data in real time for an area frequently affected by severe offshore winds. This area of Newfoundland was chosen for its abrupt and extreme southeast winds blowing offshore from the west coast.

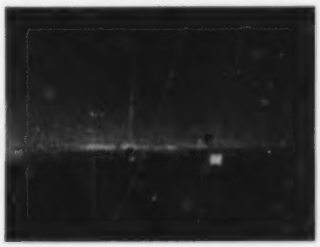
Weather information, including wind speed and direction, was deemed essential for the safety of small craft, pleasure boaters, and land transportation in the area. The coastal weather data site is currently configured to provide reports to Environment Canada every twenty (20) minutes with hourly reports being posted on the Environment Canada website (http://weatheroffice.ec.gc.ca).

As a direct result of the increase in specific weather information for the area, the frequency of wind warning has improved since the establishment of the data site. In the fall of 2000 there were a number of high wind events and the station proved to be very useful to the forecasters in the Environment Canada Newfoundland Weather Centre. The data is also included in the weather radio broadcasts of hourly weather, which go out to anyone with a weather radio receiver.

This project has resulted in an increase in awareness of hazardous marine conditions in the area, which should result in fewer people being caught on the water/roads during extreme weather.

Deliverables

- Installed automatic weather station



For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
John Merrick
Meteorological Service of Canada – Atlantic Region
Queen Square, 45 Alderney Drive, 16th floor
Dartmouth, NS B2Y 2N6
Tel.: 902-426-9125
Fax: 902-490-0726
Email : john.merrick@ec.gc.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Weather Station – Grand Manan Island, New Brunswick

Financial Summary			
FY 00/01:	$ 75,000	**NIFID #:**	2000036
Total exp.:	**$ 75,000**	**Project #:**	EC 6/00
		Category:	Prevention
		Sponsor:	EC (MSC)

This project was sponsored by Environment Canada (Meteorological Service of Canada) and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of the *Weather Station in Grand Manan Island, New Brunswick* project was to improve the quality of public and marine forecasts by improving the real time information available in a datasparse area of the Bay of Fundy. The Bay of Fundy has a very complex tidal structure and a high incidence of advection fog (fog that forms when warm, moist air flows from a warm surface across a colder surface) due to its cold water.

The automated weather station was constructed and equipped with tools to measure and report on: visibility; precipitation; atmospheric pressure; temperature/humidity; and wind speed/direction. Data is collected and reports issued on an hourly basis.

The Bay of Fundy is used by pleasure boaters, commercial mariners, and by increasing numbers of oil tankers and supertankers. This weather station provides important continuous observations of local fog and marine winds, which when incorporated into marine forecasts and warnings will minimize the potential for ship collisions, SAR incidents, and environmental disasters.

Deliverables

- Installed Weather Station at Grand Manan Island Airport
- Environment Canada News Release

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Paul Thorne
Meteorological service of Canada – Atlantic Region
Queen Square, 45 Alderney Drive, 16th Floor
Dartmouth, NS B2Y 2N6
Tel.: 902-426-9147
Fax: 902-490-0726
Email : paul.thorne@ec.gc.ca

DEPARTMENT OF FISHERIES AND OCEANS
(CANADIAN COAST GUARD)

New SAR Initiatives Fund- Final Report FY 2000/2001

School Campaign on Boating Prevention

Financial Summary			
FY 98/99:	$ 105,000	**NIFID #:**	98013
FY 99/00:	$ 56,771	**Project #:**	DFO 5/98
FY 00/01:	$ 43,229	**Category:**	Prevention
Total exp.:	**$ 205,000**	**Sponsor:**	DFO

This project was sponsored by the Department of Fisheries and Oceans (Canadian Coast Guard) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1998/1999 to 2000/2001.

The objective of the *School Campaign on Boating Prevention* was to educate young people aged 6-12 about water safety by designing an educational program that could be taught to students by teachers or instructors. An "Info Marine" picture contest was designed and implemented in schools across Canada and instructor/student manuals, a safety video, and an interactive CD ROM were developed for distribution.

One thousand (1000) bilingual (French and English) educational kits containing student/instructor manuals, videos, and CD ROMs were distributed across Canada to the Canadian Coast Guard, Canada Safety Council and the Lifesaving Society for use during presentations/training sessions. School Boards were made aware of the material for inclusion in the teaching curriculum. The annual Info Marine contest yielded 10,000 pictures in 1999 and 10,800 pictures in 2000. In order to appeal to the different ages and present information in an age-appropriate fashion, a manual was developed for each of the grades (Grades 3, 4, 5, 6). The manuals contained background information on the importance of water safety as well as classroom activities, and activities for children to bring home and do with their parent(s). A safety video for each age group was also developed and describes the "Ten Tips of Water Safety" in a clear and concise way. The CD ROM presents water safety information in the form of lessons and is followed by a quiz to test users' knowledge.

Eighteen thousand (18,000) children were educated on safety precautions surrounding boating and water-related activities, and informed on how to have fun while being safe, and not hurt themselves, others, or the environment.

Deliverables

- 1,000 Educational Kits

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Ron Miller
Department of Fisheries and Oceans
Canadian Coast Guard
200 Kent Street
Ottawa, ON K1A 0E6
Tel.: 613-990-3120
Fax: 613-996-8902
Email: millerr@dfo-mpo.gc.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Operational Guidelines for Volunteer SAR Units and the Inshore Rescue Boat Program

Financial Summary			
FY 98/99:	$ 31,898	**NIFID #:**	98012
FY 99/00:	$ 95,076	**Project #:**	DFO 6/98
FY 00/01:	$ 49,924	**Category:**	Prevention
Total exp.:	**$ 176,898**	**Sponsor:**	DFO

This project was sponsored by the Department of Fisheries and Oceans (Canadian Coast Guard) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1998/1999 to 2000/2001.

The objective of this project was to improve SAR operations for the Inshore Boat Rescue Program and volunteer agencies by developing and implementing a manual of protocols and guidelines. This manual consisted of a compilation of all of the necessary guidelines and procedures related to maritime SAR for volunteer marine SAR providers.

The SAR Seamanship Manual (bilingual) included topics such as: search planning; search techniques; rescue and pre-hospital care, towing operations; grounding; damage control; and emergency assistance other than SAR training.

A total of 250 copies of the manual were produced and distributed to Canadian Coast Guard Auxiliary (CCGA) branches, Canadian Coast Guard Regional offices, and to the Canadian Coast Guard College. Copies of the manual can be found (free of charge) on the Canadian Coast Guard SAR website (.pdf format) at: www.ccg-gcc.gc.ca/sar/nsm- nsn/main.htm.

The Canadian Power and Sail Squadron, the Department of National Defence, ICAO (International Civil Aviation Organization), IMO (International Maritime Organization), the Canadian Red Cross, St. John's Ambulance, the United States Coast Guard, the World Health Organization, and Zodiac Hurricane technologies were all consulted for expertise in developing the manual.

Deliverables

- 250 SAR Seamanship Reference Manuals

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas - Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Ron Miller
Department of Fisheries and Oceans
Canadian Coast Guard
200 Kent Street
Ottawa, ON K1A 0E6
Tel.: 1-613-990-3120
Fax: 1-613-996-8902
Email: millerr@dfo-mpo.gc.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Production of Current Field Using Self Locating Datum Marker Buoys (SLDMBs) to Improve SAR Planning

Financial Summary			
FY 99/00:	$ 9,410	**NIFID #:**	99056
FY 00/01:	$ 99,000	**Project #:**	DFO 2/99
Total exp.:	**$ 108,410**	**Category:**	Response
		Sponsor:	DFO

This project was sponsored by the Department of Fisheries and Oceans (Canadian Coast Guard) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1999/2000 to 2000/2001.

The objective of this project was to create software that would give the Joint Rescue Coordination Centre (JRCC) coordinator access to synthesized data that would improve the ability to define an initial search area and allocate resources needed for the search effort.

Prior to this initiative, multiple Self Locating Datum Marker Buoys (SLDMBs) were providing data but the JRCC controller had to make predictions manually using current mapping software. The Ocean Current Mapping System software (OCMS) was created and automatically synthesized real time information from multiple SLDMBs and displayed current fields, drifter data (position and velocity), the estimated surface flow fields and corresponding error estimates.

The development and implementation of this software will decrease search time and increase victims' chances of survival by providing SAR personnel with accurate and timely information.

Future activities may include integrating a mapping software capability, exploring deployment strategies when using SLDMBs in a search, as well as further testing to validate the OCMS.

Deliverables

- Ocean Current Mapping System software

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Jean Maillette
Department of Fisheries and Oceans
Canadian Coast Guard
Canadian Coast Guard College
P.O. Box 4500
Sydney, NS B1P 6L1
Tel.: 902-564-3660 ext. 1342
Fax: 902-562-6113
Email : maillettej@dfo-mpo.gc.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Boating Rescue Pilot Project – Laurentian Region

Financial Summary			
FY 00/01:	$ 75,128	**NIFID #:**	2000049
Total exp.:	**$ 75,128**	**Project #:**	DFO 6/00
		Category:	Response
		Sponsor:	DFO

This project was sponsored by the Department of Fisheries and Oceans (Canadian Coast Guard) and received funding from the New SAR Initiatives Fund (NIF) in Fiscal Year 2000/2001.

The objective of the *Boating Rescue Pilot Project, Laurentian Region* was to promote the establishment of marine rescue units on Quebec waters by creating a mobile team to travel across the province distributing educational material and training.

The tour was named "Tournée Sauvetage Nautique 2000" and consisted of promotional material aimed at informing municipalities about the importance of having a successful marine SAR ability/plan. Information on equipment, training, and rules was also provided to help municipalities establish the beginning of a marine SAR plan.

As a result, 49 communities were visited and approximately 130 people were reached. For each location, a report was created that outlined SAR needs specific to the area, strengths and weaknesses of the existing system, and several suggestions on how the service could be improved. A Web site and mailing list were also created as a means of communicating this initiative's message to a broad audience.

Deliverables

- Mobile education team – visits to 49 communities
- "La tournée sauvetage nautique 2000" – Final report (French only)
- Website: www.geocities.com/ebeaule/TSN2000

© Canadian Coast Guard

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Robert Jinchereau
Department of Fisheries and Oceans
Canadian Coast Guard
101 Boul. Champlain
Quebec, QC G1K 7Y7
Tel.: 418-648-5326
Fax: 418-648-7337
Email : JinchereauR@dfo-mpo.gc.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Saved by the Jacket

Financial Summary			
FY 00/01:	$ 175,940	**NIFID #:**	2000039
Total exp.:	**$ 175,940**	**Project #:**	DFO 7/00
		Category:	Prevention
		Sponsor:	DFO

This project was sponsored by the Department of Fisheries and Oceans (Canadian Coast Guard) and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of *Saved by the Jacket* was to promote the wearing of lifejackets and/or personal flotation devices (PFDs) by Canadian boaters whenever they are on the water by presenting information that made an emotional appeal as well as delivered practical information to its viewers on boating safety.

To accomplish this objective a video was produced that told the story of the development of the lifejacket/PFD and re-enacted several real-life stories of boating incident survivors and rescuers. This thirty-minute video was aired in English and in French on various television stations across the country and is now available for distribution to boating safety stakeholders.

Assistance in this initiative was received from various organizations including: the Canadian Power and Sail Squadron; the Lifesaving Society; and the Joint Rescue Coordination Centre (Victoria).

The Red Cross National Drowning Report (2000 Edition) stated that ninety percent of Canadian boaters who drown were not wearing their lifejackets/PFDs. This project will result in further education of the public on the importance of wearing lifejackets/PFDs while engaged in boating and boating-related activities.

Deliverables

- "Saved by the Jacket" – Manual
- "Saved by the Jacket" – Video and PSA's

© Canadian Coast Guard

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Céline Couture
Department of Fisheries and Oceans
Canadian Coast Guard
Office of Boating Safety
200 Kent Street, Station 5S041
Ottawa, ON K1A 0E6
Tel.: 613-993-9106
Fax: 613-996-8902
Email : CoutureCe@dfo-mpo.gc.ca

DEPARTMENT OF NATIONAL DEFENCE
(CANADIAN FORCES)

New SAR Initiatives Fund- Final Report FY 2000/2001

Infrared Eye: Airborne Prototype

Financial Summary			
FY 98/99:	$ 300,000	**NIFID #:**	98037
FY 99/00:	$ 417,612	**Project #:**	DND 9/98
FY 00/01:	$ 162,386	**Category:**	Response
Total exp.:	**$ 879,998**	**Sponsor:**	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1998/1999 to 2000/2001.

The objective of the *Infrared Eye: Airborne Prototype* was to increase the performance and operational efficiency of the Wide Area Coverage Infrared Surveillance System (WACISS) by developing a modified operational airborne prototype that could be used for testing.

The Infrared (IR) Eye was a new concept of surveillance camera with simultaneous wide and narrow fields of view individually enhanced for their specific task of detection and recognition for SAR operations. The IR Eye allowed SAR personnel to launch and/or continue SAR operations at night and under conditions of limited visibility, resulting in reduced time searching for people in distress.

The modifications that were made to the laboratory prototype were: to use high-resolution IR cameras with a built-in cryocooler (to increase the detection capability); to reduce the ratio between the wide and narrow fields of view (to better reflect a natural field of vision); to replace the optical display (for simplicity and ruggedness); to integrate an eye-tracking system; and to replace several hardware components (to reduce volume).

The evaluation of the IR Eye Airborne Prototype is underway. The evaluation will measure the success of the IR Eye in several SAR scenarios including: small craft with people (on water and person in water); people in an open field; people in wooded area (coniferous and deciduous) in various seasons; a vehicle moving in a wooded area; and a vehicle moving on a forest road.

The NSS will be kept up-to-date on the results of the testing and evaluation.

Deliverables

- Modified laboratory prototype for testing and evaluation.
- Various scientific reports

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Dr. Paul Chevrette
Department of National Defence
Defence Research Establishment Valcartier
2459 Boul. Pie – XI Nord
Val Belair, QC G3J 1X5
Tel.: 418-844-4000 ext. 4733
Fax: 418-844-4538
Email: paul.chevrette@drev.dnd.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Intravenous (IV) Warming Set

Financial Summary			
FY 99/00:	$ 0	**NIFID #:**	99017
FY 00/01:	$ 5,283	**Project #:**	DND 2/99
Total exp.:	**$ 5,283**	**Category:**	Response
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1999/2000 to 2000/2001.

The objective of the *Intravenous Warming Set* project was to enhance DND Search and Rescue Technician medical protocols relating to the treatment of hypothermic patients by purchasing Intravenous (IV) Warmers for field evaluation.

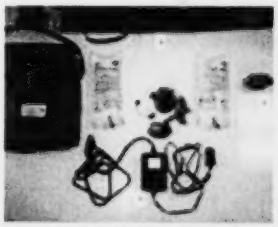
The IV warming sets were intended to enable emergency personnel to dispense a warmed IV solution. The devices were powered by accessing an aircraft or ground vehicle electrical system. An IV solution should be at or slightly above body temperature when administered to a victim. Conventional methods of warming an IV are time consuming when working in colder environments. Often patients must be moved to warmer areas in order for the IV to be warmed appropriately.

This initiative involved purchasing nine (9) IV Warming Sets and distributing them to primary Canadian Forces (CF) SAR Units for evaluation in various conditions. The maximum temperature achievable with the warming set was 40.5°C. Medical protocol states that the minimum temperature for administration of a warmed IV solution to a hypothermic patient is 43°C. Therefore, the IV Warming Sets were found unacceptable for use by CF SAR units.

Alternative systems will be investigated for future evaluation.

Deliverables

- 9 IV Warming Sets



For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Major T. F. Hughes
Department of National Defence
MGen George R. Pearkes Building
Ottawa, ON K1A 0K2
Tel.: 613-998-6904
Fax: 613-990-9726
Email : ae703@debbs.ndhq.dnd.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

442 Squadron Sequence Interoperability SAR FM Radio

Financial Summary			
FY 99/00:	$ 77,690	**NIFID #:**	99001
FY 00/01:	$ 18,380	**Project #:**	DND 3/99
Total exp.:	**$ 96,070**	**Category:**	Response
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1999/2000 to 2000/2001.

The objective of the *442 Squadron Sequence Interoperability SAR FM Radio* project was to improve the ability of the CC115 (Buffalo aircraft) fleet to participate in joint SAR activities by providing the fleet with an FM radio that was capable of communication with other SAR agency aircraft, ground facilities and surface vessels.

TFM-138D/G radios were purchased and installed for the CC115 fleet (6 operational aircraft). These new radios were found capable of communicating with other SAR agencies or resources such as: BC Ambulances; BC Forestry; CASARA aircraft; Canadian Coast Guard vessels using marine bands; and ground search parties.

Operational tests were conducted to ensure the quality of the system. Tests were completed successfully and the radios have been used operationally with very few limitations.

This initiative increased the quality of communications not only for the CC115 fleet, but also for all SAR agencies involved in joint SAR operations. The new capability also enables this resource to be used during searches as an airborne on-scene command platform.

Deliverables

- Installation of 6 VHFM Radios

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
H. W. LeDrew
Department of National Defence
MGen George R. Pearkes Building
Ottawa, ON K1A 0K2
Tel.: 613-993-0918
Fax: 613-990-9726
Email : ad909@debbs.ndhq.dnd.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Rescue Hoist Quick Splice for "Sea King" Helicopter

Financial Summary			
FY 99/00:	$ 252	**NIFID #:**	99020
FY 00/01:	$ 47,130	**Project #:**	DND 8/99
Total exp.:	**$ 47,382**	**Category:**	Response
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1999/2000 to 2000/2001.

The objective of the project was to enhance the Sea King helicopter (CH 124) fleet ability to conduct rescue missions by providing an alternative to departure from the SAR scene in the event of certain hoist cable malfunctions.

Thirty-four (34) "Quick Splice" rescue hoists were purchased for the CH 124 fleet. The Quick Splice system was designed to allow continued safe use of a frayed or severed hoist cable in a SAR situation. The United States Coast Guard also employs the same Quick Splice system.

The new hoisting system is compatible with all other hoisting equipment used in Sea King operations. The system was tested for design and performance and proven successful. The addition of the Quick Splice system will provide the Sea Kings with a viable option to continue hoisting operations with the new variable speed rescue hoist, if the hook or cable becomes unserviceable.

Deliverables

- 34 "Quick Splice" rescue hoists

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
MWO D. B. McQueen
Department of National Defence
MGen George R. Pearkes Building
Ottawa, ON K1A 0K2
Tel.: 613-998-5778
Fax: 613-993-5618
Email : af257@issc.debbs.ndhq.dnd.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Canadian Air Search and Rescue Association (CASARA)
L-Helpers with Antenna

Financial Summary			
FY 99/00:	$ 133,750	**NIFID #:**	99008
FY 00/01:	$ 57,514	**Project #:**	DND 9/99
Total exp.:	**$ 191,264**	**Category:**	Response
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1999/2000 to 2000/2001.

The objective of this project was to increase CASARA's SAR capability by providing units with sufficient homing devices to effectively respond to and locate the source of an active Emergency Locating Transmitter (ELT). An ELT is an emergency radio beacon that is carried on an aircraft and is activated automatically when the aircraft is in distress. Once activated, the ELT send out a directional signal allowing rescue teams to locate the source of the signal.

Two hundred and thirteen (213) homing units and one hundred and forty-eight (148) antennae were purchased and distributed to CASARA units across Canada. Homing devices are designed to pick up various types of signals and then track these signals to their source.

Since purchased, the homers have been used operationally by CASARA crews to successfully locate the source of ELT signals.

Deliverables

- 213 Homing Units
- 148 Antennas

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
John Kelly
CASARA Administration
P.O. Box 183
Westwin MPO
Winnipeg, MB R3J 3Y5
Tel.: 204-833-2500 ext. 6634
Fax: 204-833-2604
Email : jkelly@casaranational.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Sensor Pod Installation for Search and Rescue Palletized Air Launchable (SARPAL)

Financial Summary			
FY 99/00:	$ 13,458	**NIFID #:**	99002
FY 00/01:	$ 340,511	**Project #:**	DND 11/99
Total exp.:	**$ 353,969**	**Category:**	R & D
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1999/2000 to 2000/2001.

The objective of this project was to investigate the feasibility of designing and manufacturing a palletized (easily transferred from one aircraft to another) roll-on roll-off system for an unmodified CC130 Hercules aircraft. Main system components included: a pressurized bubble SAR Observer door; a pressurized pyrotechnics delivery chute; and an enhanced SAR observer station and an external articulating strut. The strut was intended to provide CC130 crews with the capability to deploy a variety of electro-optic and thermal imaging sensors and to act as a platform for antennae, enabling communication with, and remote operation of, the SARAL M2 autonomous marine vehicle.

NIF funding was provided for the initial developmental work on SARPAL, an autonomous life raft being developed for delivery under parachute from a CC130 Hercules aircraft. SARPAL has been successfully engineered as a remotely operated, diesel-powered rescue platform. It is envisioned as a recovery device for survivors in maritime distress situations where the incident occurs either beyond the operating range of land-based helicopter resources or where weather conditions preclude a rescue attempt by helicopter crews.

Initially, the Sensor Pod for SARPAL project involved the design and fabrication of part of the aircraft control portion of the SARPAL project. When other sources of funding did not materialize, the project requested a change in scope to conduct a feasibility study and initial design phase for the development of the Rapid Mount Airborne Sensor system (RMAS); this was approved. The Sensor Pod project was completed and design work on the RMAS system continues with NIF funding.

Deliverables

- Feasibility study

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Captain David Kirkland
Department of National Defence
MGen R. Pearkes Building
Directorate of Aerospace Requirements 2-4-2
Ottawa, ON K1A 0K2
Tel.: 613-991-9787
Fax: 613-990-9726
Email : ac908@debbs.ndhq.dnd.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Aircraft Icing Model Update

Financial Summary			
FY 99/00:	$ 0	**NIFID #:**	99004
FY 00/01:	$ 45,900	**Project #:**	DND 13/99
Total exp.:	**$ 45,900**	**Category:**	Prevention
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of the *Aircraft Icing Model Update* project was to improve aircraft icing forecasts by improving the forecast model used to predict the occurrence of aircraft icing. This improved model will benefit the Canadian Forces, NAV Canada, as well as the general aviation community in Canada.

The previously used model (Ice for Windows version 1) was upgraded to include several new modules such as: cloud microphysics; icing intensity; and cloud dynamics.

This model was distributed to all DND meteorological offices, Environment Canada and NAV Canada weather forecast and briefing offices for testing and feedback. An evaluation will be completed against actual pilot reports of aircraft icing during the winter flying season of 2001 and 2002.

Deliverables

- Improved forecast model

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Jim Yip
Department of National Defence
Department of Meteorology and Oceanography 3
Ottawa, ON K1A 0K2
Tel.: 613-996-3640
Fax: 613-995-4197
Email : jim.yip@ec.gc.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

An Advisor Tool for Optimal Inland Air Search Planning (SARPlan)

Financial Summary			
FY 99/00:	$ 198,100	**NIFID #:**	99005
FY 00/01:	$ 277,859	**Project #:**	DND 14/99
Total exp.:	**$ 475,959**	**Category:**	R & D
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1999/2000 to 2000/2001.

The objective of this project was to improve the effectiveness of SAR response by developing an advisor tool based on search theory that suggested optimal strategies for inland air searches. This tool is a computerized decision support system intended to maximize the probability of detection.

The tool will assist search planners in several parameters: defining the search area; appropriate search patterns; altitudes; track spacing; and type/origin of the missing aircraft. SARPlan has the potential to reduce search time and search area as well as increase the probability of detection.

The initiative included: an object-oriented analysis and design of the functionalities expected from the tool; literature reviews of search theory, optimization techniques, detection models, available mapping data and probability of containment models; implementation; and evaluation by a search theory expert.

SARPlan has been widely accepted as a unique overland search-planning tool based on search theory and there is intent to investigate the feasibility of integration into the Canadian Air Force's SAR mission management system. SARPlan received an award for excellence from the Canadian Information Productivity Awards (Next Generation /Technology Innovation Solutions category) in August 2001.

Deliverables

- SARPlan software
- SARPlan: An Innovative Tool for Optimal Planning of SAR Missions – Powerpoint Presentation
- SARPlan: A Decision Support System for Canadian SAR Operations - Report

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Dr. Irene Abi-Zeid
Department of National Defence
Defence Research Establishment Valcartier
2459 Boul Pie – XI Nord
Val Belair, QC G3J 1X5
Tel.: 418-844-4000 ext. 4733
Fax: 418-844-4538
Email : irene.abi-zeid@drev.dnd.ca

Limb Cooling and Performance Decrements (Cold Exposure Survival Model)

Financial Summary			
FY 99/00:	$ 30,778	**NIFID #:**	99003
FY 00/01:	$ 24,169	**Project #:**	DND 15/99
Total exp.:	**$ 54,947**	**Category:**	Response
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1999/2000 to 2000/2001.

The objective of the project was to improve the accuracy of the Cold Exposure Survival Model (CESM) and extend its prediction capability to limb cooling and performance by providing an estimate of when a cold casualty loses the ability to perform (manual dexterity and strength).

Field trials involved 28 volunteer survival trainees who participated in a variety of performance tests each day during six consecutive days under cold exposure. The subjects were monitored physiologically (body temperature and heart rate) and tested on three dexterity tasks (i.e. nut/bolt assembly, knot-tying, and GPS coordinates entry), two strength tasks (hand grip and shoulder/arm squeeze), and four cognitive tasks (judgment, reasoning, problem-solving, and vigilance).

The tests revealed that finger temperature was significantly correlated to air temperature and had an impact on subject manual performance. For example, grip strength, knot tying, and nut-bolt assembly performance decreased by 13, 31, and 16 per cent respectively. A decrement in dexterity performance was noted for finger temperatures of less than 15°C.

The prediction of how cold impairs performance is useful for SAR contingency planning, the prevention of injury, and the optimization of equipment and procedures.

Deliverables

- Improved Cold Exposure Survival Model
- Field Trial report

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Peter Tikuisis
Department of National Defence
Defence and Civil Institute of Environmental Medicine
1133 Sheppard Avenue West
Toronto, ON M3M 3B9
Tel.: 416-635-2099
Fax: 416-635-2132
Email : peter.tikuisis@dciem.dnd.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Maritime Helicopter Rescue Mannequins

Financial Summary			
FY 00/01:	$ 18,450	**NIFID #:**	2000024
Total exp.:	**$ 18,450**	**Project #:**	DND 1/00
		Category:	Response
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of the *Maritime Helicopter Rescue Mannequins* project was to improve the search and rescue capabilities of the CH 124 (Sea King aircraft) crews by providing realistic hoisting aids for SAR proficiency training.

To accomplish this objective six "Rescue Randy's" (6-feet tall, 165 lbs.), six ("Juvenile Jennifer's" (4-feet tall, equivalent to a seven or eight year-old child) and six "Water Randy's" (adjustable buoyancy by adding weight to the abdomen) rescue mannequins were purchased and provided to the three Maritime Helicopter Squadrons for use during hoist training.

The rescue mannequins were all fully articulated, built with durable and waterproof material, and used near-unbreakable stainless steel cables that could be used in seawater. The SAR community envisions these mannequins as the most efficient way of modeling the reality of rescue recovery without using a live subject.

The mannequins will enable SAR crews to continue training while eliminating the exposure of live simulated casualties to reduce the risks of helicopter hoist training.

Deliverables

- 6 Rescue Randy training aids
- 6 Juvenile Jennifer training aids
- 6 Water Randy training aids

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas - Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
MWO D. B. McQueen, CD (DAR 3-6)
Department of National Defence
Canadian Forces
Major-General George R. Pearkes Bldg.
Ottawa, ON K1A 0K2
Tel.: 613-998-5778
Fax: 613-993-5618
Email : af257@issc.debbs.ndhq.dnd.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Canadian Air Search and Rescue Association (CASARA) First Aid Kits

Financial Summary			
FY 00/01:	$ 10,394	**NIFID #:**	2000019
Total exp.:	**$ 10,394**	**Project #:**	DND 4/00
		Category:	Response
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of this project was to ensure that CASARA personnel are able to treat injuries that may be incurred during operational SAR deployments and/or training exercises by purchasing first aid kits for CASARA units.

Sixty-six standard British Columbia (BC) regulation first aid kits were purchased and distributed to all provincial/territorial CASARA branches.

In addition to improving the safety of CASARA personnel while deployed, this initiative addressed Workers Compensation Board (WCB) policy, which states that first aid kits must be made available to employees in the workplace.

Deliverables

- 66 BC regulation First Aid kits

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
John Kelly
CASARA Administration
P.O. Box 183
Westwin MPO
Winnipeg, MB R3J 3Y5
Tel.: 204-833-2500 ext. 6634
Fax: 204-833-2604
Email : j.kelly@casaranational.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

SAR Noise Canceller Field Trial

Financial Summary			
FY 00/01:	$ 38,772	**NIFID #:**	2000029
Total exp.:	**$ 38,772**	**Project #:**	DND 5/00
		Category:	R & D
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of the *SAR Noise Canceller Field Trial* project was to reduce the level of received noise heard on high frequency (HF) band radios to safer levels, thus enabling clearer communications by developing a high performance noise canceling algorithms for use at SAR radio receiver sites.

To accomplish this objective, noise samples were collected and analyzed. Operators' comments on system performance before and after implementation of the noise-canceling algorithm were logged for evaluation.

The enhanced system reduced noise by 18 decibels (dB) and preserved the volume and clarity of voice signals. However, based on the comment log, operators did not have a high level of confidence in the system and feared missing calls. It is anticipated that confidence levels will increase over time.

Deliverables

- High Performance Noise Canceling Algorithms for use at JRCC SAR Radio Receiver Sites

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas - Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Karen Bryden
Communications Research Centre
3701 Carling Avenue
Ottawa, ON K2H 8S2
Tel.: 613-998-2515
Fax: 613-990-7987
Email : karen.bryden@crc.ca

Autonomous Liferaft for the Search and Rescue Palletized Air Launchable (SARPAL)

Financial Summary			
FY 00/01:	$ 451,393	**NIFID #:**	2000017
Total exp.:	**$ 451,393**	**Project #:**	DND 6/00
		Category:	R & D
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of the project was to further develop and test SARPAL by confirming the proof-of- concept for the autonomous marine vehicle (AMV) through: the conduct of live air-drop tests from a CC130 (Hercules) aircraft; developing a life recovery ramp (LRR) system; and the selection of cameras, lights and communication systems for installation on the marine vehicle.

SARPAL is an autonomous life raft made for delivery under parachute from a CC130 aircraft. SARPAL was developed as a remotely operated, diesel-powered marine vehicle that will recover survivors from maritime distress scenarios while reducing the exposure of SAR Technicians to hazardous sea conditions.

Drop tests were conducted to evaluate separation of the AMV from the aircraft, parachute blooming and inflation sequence of the raft and its integral weather hood. A life recovery ramp will assist in the rescue of incapacitated survivors from the open water into the AMV.

The airdrops concluded that SARPAL could be delivered safely by air. Additional airdrops will be necessary to gain Canadian Forces certification before the SARPAL system can be considered for inclusion in the Canadian Forces SAR equipment inventory. Development work continues on the Life Recovery Ramp.

Deliverables

- Airdrop report –draft
- Final Report

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Captain M. Ducharme
Department of National Defence
MGen Georges R. Pearkes Building
Ottawa, ON K1A 0K2
Tel.: 613-991-9825
Fax: 613-998-9235
Email : ab267@debbs.ndhq.dnd.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Hypothermia Casualty Evacuation Bags (Wiggy Bags)

Financial Summary			
FY 00/01:	$ 15,800	**NIFID #:**	2000022
Total exp.:	**$ 15,800**	**Project #:**	DND 8/00
		Category:	Response
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of the *Hypothermia Casualty Evacuation Bags* project was to enhance the survivability of rescued hypothermic casualties by purchasing 36 casualty evacuation bags for distribution to the maritime helicopter community (Department of National Defence) in Esquimalt, BC and Shearwater, NS for use during SAR operations.

These "Wiggy Bags" (visit www.wiggys.com to see a picture) enhance body core warming and temperature stabilization in hypothermic victims, which is the critical first step in treatment of these patients after retrieval from the open water.

This new capability will help to ensure that when hypothermic victims are rescued at sea, they are provided with adequate protection to ensure that health risks associated with cold water immersion are substantially reduced and survivability is increased until proper medical attention can be provided.

Deliverables

- 36 Casualty Evacuation Bags

© Wiggys

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
MWO D .B. McQueen
Department of National Defence
Canadian Forces
MGen George R. Pearkes Building
Ottawa, ON K1A 0K2
Tel.: 613-998-5778
Fax: 613-993-5618
Email : af257@issc.debbs.ndhq.dnd.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Helicopter Rescue Basket

Financial Summary			
FY 00/01:	$ 34,460	**NIFID #:**	2000075
Total exp.:	**$ 34,460**	**Project #:**	DND 12/00
		Category:	Response
		Sponsor:	DND

This project was sponsored by the Department of National Defence (Canadian Forces) and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The purpose of this project was to increase the helicopter hoisting capabilities in SAR operations by procuring 19 rescue baskets for the new Canadian Forces Cormorant helicopter fleet. They will be distributed one per aircraft (15 in total), plus one spare basket for each primary CF SAR helicopter unit (103 RS Gander NF (4), 413 Squadron Greenwood NS (5), 424 Squadron. Trenton ON (4), 442 Squadron Comox BC (6)).

The rescue baskets will reduce the exposure of SAR Techs to hazardous situations by reducing the requirement for conducting "double hoists" in some situations such as the recovery of ambulatory patients from surface vessels. The baskets can be used to extract hypothermic victims more quickly from the water, while keeping them in the critical horizontal position to retain body core heat until recovery procedures can be initiated.

Deliverables

- 19 rescue baskets for the Cormorant helicopter fleet

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Captain David Kirkland
Department of National Defence
Canadian Forces
101 Colonel By Drive
Ottawa, ON K1A 0K2
Tel.: 613-991-9787
Fax: 613-990-9726
Email : ac908@debbs.ndhq.dnd.ca

PARKS CANADA AGENCY

New SAR Initiatives Fund- Final Report FY 2000/2001

Risk Management Initiative - Rediscovery International Foundation

Financial Summary			
FY 98/99:	$ 155,000	**NIFID #:**	98001
FY 99/00:	$ 111,000	**Project #:**	CH 4/98
FY 00/01:	$ 40,583	**Category:**	Prevention
Total exp.:	$ 306,583	**Sponsor:**	PC

This project was sponsored by the Parks Canada Agency and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1998/1999 to 2000/2001.

The objective of this project was to increase the level of safety standards and prevention activities present in the Rediscovery International Camps. The project involved conducting risk/safety assessments in 20 camps located in British Columbia, creating wilderness recreation safety guidelines and training the camp staff, developing SAR prevention and response measures, establishing wilderness recreation committees and an Ombudsman, and developing a safety training manual with corresponding video.

The Rediscovery International Foundation was established in 1985 to: develop, promote and operate Rediscovery educational programs for young people that integrate cultural and natural history; enhance a greater sense of cultural identity and pride among youth; educate and develop an appreciation and respect for Indigenous cultures and their relationship with the natural world; and cooperate with other organizations in the development of educational projects. Rediscovery International Camps provide a unique outdoor experience to youth throughout the world in an environment where a respect for oneself, others and the land is cultivated through wilderness activity and an appreciation for native tradition. For more information please visit the Rediscovery website at www.rediscovery.org.

The Rediscovery International Foundation strives to develop a heightened level of safety and prevention awareness in Rediscovery camps. The foundation places a higher level of priority on these topics in staff training. Overall, this project has resulted in a safer environment for all Rediscovery International camp participants.

Deliverables

- 20 Risk Assessments
- "Rediscovery International: Camp Safety Standards and Environmental Guidelines" – Manual
- "Health and Safety"- video

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Michel Villeneuve
Parks Canada
25 Eddy Street, 4th Floor
Hull, QC K1A 0M5
Tel.: 819-997-1324
Fax: 819-997-3380
Email : michel_villeneuve@pch.gc.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Enhancing and Linking the Volunteer Amateur Radio Network – Bay of Fundy, New Brunswick

Financial Summary			
FY 00/01:	$ 18,000	**NIFID #:**	2000061
Total exp.:	**$ 18,000**	**Project #:**	PC 1/00
		Category:	Volunteers
		Sponsor:	PC

This project was sponsored by the Parks Canada Agency and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of this project was to improve emergency radio communications for search and rescue events in Fundy National Park, New Brunswick and in the surrounding area along the Bay of Fundy. The project consisted of completing the amateur radio repeater system for a 120-kilometre section of remote coastline along the Bay of Fundy and providing the public with enhanced access and monitoring of the amateur radio network.

Amateur "HAM" Radio operators are volunteers who can assist in monitoring and/or operating radio communications for various frequencies and outputs (VHF and UHF). Amateur radio operators are frequently used in the context of SAR, as effective communication is essential to a successful SAR mission.

Following installation of the equipment, an education and training workshop was hosted by an amateur radio group for the SAR community within the area of concern. This workshop ensured that all interested parties were aware of the enhanced communications in the area.

This project resulted in an enhanced level of field radio communications between SAR organizations, which has improved SAR incident coordination and safety of SAR personnel. The following organizations were also involved in this project: Fundy National Park; New Brunswick Ground Search and Rescue (NBGSAR); NBTEL; Tri-Country Amateur Radio Club; and Tri-Country Search and Rescue.

Deliverables

- Installed Amateur Radio Repeater System
- Training Workshop

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Michel Villeneuve
Parks Canada
25 Eddy Street, 4th Floor
Hull, QC K1A 0M5
Tel.: 819-997-1324
Fax: 819-997-3380
Email : michel_villeneuve@pch.gc.ca

New SAR Initiatives Fund- Final Report FY 2000/2001

Improve and Expand Water/Ice SAR – Rideau Canal, Ontario

Financial Summary			
FY 00/01:	$ 374,400	**NIFID #:**	2000059
Total exp.:	**$ 374,400**	**Project #:**	PC 2/00
		Category:	Response
		Sponsor:	PC

This project was sponsored by the Parks Canada Agency and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The *Improve and Expand Water/Ice Search and Rescue on the Rideau Canal* project sought to establish and standardize an effective water and ice search and rescue capability along the Rideau Canal, Ontario. Fifteen fire departments were equipped with rescue kits, entry kits, training and manuals.

Equipment for this initiative included rescue kits consisting of six hundred (600) feet of floating rope, a reach pole system, stretcher, floating rescue sling, ice anchors, two throw bags, a tag line, and 20 carabineers. Entry kits included: Ice Commander 9000; a personal flotation device; helmet; ice picks; strobe light; knife; and carry bag. A rescue response form was also developed that captured incident details and helped evaluate the success of the program

Municipal Leaders, Fire Chiefs, the Fire Marshal's office, the Rideau Corridor Committee, and members of the media attended an Open House that was held to communicate the activities that surrounded the project and the improvements to SAR response in the area. Along with brief presentations on the background of the initiative, members of the Kingston Fire Department demonstrated both ice and open water rescue techniques.

This project resulted in providi ng fire fighters along the Rideau Canal Corridor with a safe working system and minimized the occurrence of untrained persons venturing out onto the ice to facilitate a rescue.

Deliverables

- 26 Rescue Kits
- 104 Entry Kits
- Training sessions for 200 participants
- Training Manual
- Response form

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas - Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Randy Moore
Kingston Fire Department
271 Brock Street
Kingston, ON K7L 1S5
Tel.: 613-548-4001 ext. 210
Fax: 613-548-7861
Email : rmoore@city.kingston.on.ca

SOLICITOR GENERAL
ROYAL CANADIAN MOUNTED POLICE

SAR Volunteer Association of Canada (SARVAC)
SAR Prevention (PSAR) Program

Financial Summary			
FY 99/00:	$ 143,000	**NIFID #:**	99026
FY 00/01:	$ 134,000	**Project #:**	RCMP 3/99
Total exp.:	**$ 277,000**	**Category:**	Prevention
		Sponsor:	RCMP

This project was sponsored by the Royal Canadian Mounted Police and received funding from the New SAR Initiatives Fund (NIF) from fiscal year 1999/2000 to 2000/2001.

The objective of *SARVAC's PSAR Program* was to reduce ground Search and Rescue (GSAR) incidents by providing concise and effective information concerning trip planning and wilderness survival to interested groups. To achieve this objective, this project involved developing and distributing public information materials that educated readers about preventing SAR incidents and surviving potential wilderness incidents.

The prevention materials included "Trip Plan" forms and "Survival Cards". The Trip Plan forms were presented in a brochure format and required the user to fill out essential information prior to venturing into the wilderness. For example, someone filling out the form would include their name, where they are going, how they are getting there, when they left, when they should be expected back, an emergency contact name, as well as several other pieces of information that would assist searchers in locating their whereabouts should a search need to be launched. This form would then be left with family or friends, or left on the windshield of a vehicle. The Survival Cards are small business-card size cards that contain simple and concise survival information. The cards are small enough that they present no burden to carry with you, and they are made of reflective material, which allows them to double as a signaling mirror. Both the Trip Plan form and the Survival Card were modified from materials already being used in British Columbia and Manitoba.

Throughout the two years of the program, two million Trip Plan brochures and 200,000 Survival Cards were printed and distributed. The products were distributed to SARVAC directors in each province and territory, who then distributed the materials to GSAR teams who passed the information along throughout their communities.

Deliverables

- 2,000,000 "Trip Plan" forms
- 200,000 "Survival Cards"
- PSAR website: www.sarvac.org
- Toll-free phone line: 1-888-200-9065
- Email address

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web site: http://www.nss.gc.ca

Sponsor/Project Manager
Jacqueline Bannach
Contract Policing
Solicitor General – Royal Canadian Mounted Police
1200 Vanier Parkway
Ottawa, ON K1A 0R2
Tel.: 613-993-8437
Fax: 613-998-2405
Email : Jacqueline.Bannach@rcmp-grc.gc.ca

BRITISH COLUMBIA

New SAR Initiatives Fund- Final Report FY 2000/2001

Communication Upgrade – Penticton, BC and Region

Financial Summary			
FY 00/01:	$ 32,944	**NIFID #:**	2000005
Total exp.:	**$ 32,944**	**Project #:**	BC 1/00
		Category:	Response
		Sponsor:	BC

This project was sponsored by the British Columbia Provincial Emergency Program and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The Penticton, BC and Region *Communication Upgrade* project provided the area's Ground Search and Rescue (GSAR) groups with an improved communications network and command system. This system was made up of electronic equipment that enabled a computerized mapping capability, the tracking of SAR personnel, and a communications upgrade to allow communications to occur even in the most remote areas.

The equipment included: computer, monitor, printer, photocopier, mobile repeater, several fixed repeaters, one satellite phone, two cellular phones, mobile radios, GPS (global positioning system) units, and Magellan Accu Map software.

This new electronic system allowed the area's GSAR teams to use digitized maps of the areas that they were searching, and provided accurate positioning of all teams in order to track all searchers throughout a search.

In a recent search for a downed aircraft SAR personnel were sent out on snowmobiles and on foot. The new equipment meant that everyone had effective communications at all times, not only with other team members and Base Camp, but also with the Canadian Forces aircraft.

Other organizations that assisted in the success of this project were: Amateur Radio; BC Ambulance; the BC Justice Institute Emergency Management Division; Industry Canada; and Telus Mobility.

Deliverables

- Communication equipment

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web Site: http://www.nss.gc.ca

Sponsor/Project Manager
Suzanne LaRoy
Provincial Emergency Program
P.O. Box 9201
Stn. Prov. Gov't
Victoria, BC V8W 9J1
Tel.: 250-952-4897
Fax: 250-952-4888
Email : suzanne.laroy@ag.gov.bc.ca

NORTHWEST TERRITORIES

Underwater Dive Rescue – Yellowknife, NWT

Financial Summary			
FY 00/01:	$ 30,000	**NIFID #:**	200003
Total exp.:	**$ 30,000**	**Project #:**	NWT 1/00
		Category:	Response
		Sponsor:	NWT

This project was sponsored by the Northwest Territories Emergency Services Division and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of *Yellowknife's Underwater Dive Rescue* project was to develop an underwater dive rescue capability in Yellowknife, NWT. A dive rescue team was assembled using the City of Yellowknife Emergency Response Team.

This initiative provided dry suits and underwater dive equipment for four divers. The City trained eight Career Emergency responders to Dive Rescue International's Dive Rescue Level 2 standard.

Yellowknife is partially surrounded by Great Slave Lake, as well as numerous smaller lakes, river systems, and creeks. These water systems support a thriving floatplane transportation industry, commercial fishing, major local and tourist recreational activities, and winter road links. The project provided Yellowknife with fast and efficient underwater dive capability.

Deliverables

- 4 Dry Suits
- 4 sets of underwater diving equipment
- Training for 8 responders – Dive Rescue International Level 2 standard

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web Site: http://www.nss.gc.ca

Sponsor/Project Manager
Eric Bussey
NWT Emergency Services Division
600, 5201-50 Avenue
Northwest Tower
Yellowknife, NT X1A 3S9
Tel.: 867-920-6133
Fax: 867-873-8193
Email: eric_bussey@gov.nt.ca

ONTARIO

Marine Unit Enhancement – Barrie, Ontario

Financial Summary			
FY 00/01:	$ 10,962	**NIFID #:**	2000068
Total exp.:	**$ 10,962**	**Project #:**	ON 1/00
		Category:	Prevention
		Sponsor:	ON

This project was sponsored by Emergency Measures Ontario and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of the *Marine Unit Enhancement* project was to improve the marine search and rescue (SAR) response on Lake Simcoe, Ontario by equipping a Barrie Police Service patrol vessel with a marine SAR capability.

Lake Simcoe is an active area for both recreational and commercial marine activity and the popularity of the area is increasing. The Barrie Police Service responds to approximately 30 calls per year to vessels in distress and citizens requiring assistance on the water.

The police patrol vessel was equipped with: antenna support; emergency lights; emergency lift with electric winch and tow eye; mounting system for RADAR, antenna and light system; marine RADAR unit and plotter; Global Positioning System (GPS); SONAR equipment (depth measuring); survival suits and vests; inflatable personal flotation devices (PFDs); ropes, fenders and markers; and first aid gear.

This project has enhanced the marine rescue capability available on Lake Simcoe and resulted in a more rapid response to distress calls and an improved capability to provide assistance at the scene of incidents.

Deliverables

- Marine SAR Vessel Equipment

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web Site: http://www.nss.gc.ca

Sponsor/Project Manager
Inspector Mark Neelin
Barrie Police Service
29 Sperling Drive
P.O. Box 1888
Barrie, ON L4M 4T2
Tel.: 705-725-7025
Fax: 705-728-2971
Email : info@police.barrie.on.ca

Wilderness Training Institute: An Education Program in Prevention

Financial Summary			
FY 00/01:	$ 67,043	**NIFID #:**	2000070
Total exp.:	**$ 67,043**	**Project #:**	ON 2/00
		Category:	Prevention
		Sponsor:	ON

This project was sponsored by Emergency Measures Ontario and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The purpose of the Wilderness Training Institute's *Education Program in Prevention* was to develop an educational program for the average user of the outdoors that presented wilderness survival skills and the prevention of incidents in an easy-to-learn format.

An educational kit was developed and included an Instructor's Manual and Student Workbook. This program was designed to be presented in a teaching environment, and its accessibility permitted it to be delivered by most ground Search and Rescue (GSAR) volunteer groups and to a wide range of audiences.

The manuals included topics such as building shelters, building fires, basic first aid, nutrition, personal equipment, using emergency locator equipment, and various techniques on how to help searchers find lost victims.

Deliverables

- Wilderness Training Institute: Basic Wilderness Survival Course – Instructor's Manual
- Wilderness Training Institute: Basic Wilderness Survival Course – Student Workbook

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web Site: http://www.nss.gc.ca

Sponsor/Project Manager
David Arama
Wilderness Training Institute
908 South Ridge Street
Oshawa, ON L1H 8A5
Tel.: 905-435-7305
Fax: 519-570-2021
Email : wscsurvival@idirect.com

New SAR Initiatives Fund- Final Report FY 2000/2001

Air Service and Emergency Response - Ottawa-Carleton Regional Police

Financial Summary			
FY 00/01:	$ 574,368	**NIFID #:**	200069
Total exp.:	**$ 574,368**	**Project #:**	ON 3/00
		Category:	Response
		Sponsor:	ON

This project was sponsored by Emergency Measures Ontario and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of the *Air Service and Emergency Response* project was to improve ground and marine search response capabilities in Southest Ontario by equipping a fixed wing aircraft with various equipment that will permit the aircraft to be used in an air support role to GSAR in virtually all weather conditions.

The equipment included: a thermal imaging camera, a gyro stabilized binocular suite, and an enhanced radio system.

This new capability reduced the amount of time required to conduct an initial airborne search of an area and increased the accessibility to remote regions. It also permitted the aircraft to communicate with ground and/or marine rescue resources that could direct them to the site of an incident.

Deliverables

- Aircraft search equipment

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas - Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web Site: http://www.nss.gc.ca

Sponsor/Project Manager
Senior Constable Barry MacDonald
Ottawa-Carleton Regional Police Service
474 Elgin Street
P.O. Box 9634
Ottawa, ON K2P 2J6
Tel.: 613-236-1222
Fax: 613-236-9360
Email : info@police.ottawa-carleton.on.ca

QUEBEC

New SAR Initiatives Fund- Final Report FY 2000/2001

Creating the Basis for a Volunteer GSAR Structure - Québec

Financial Summary			
FY 00/01:	$ 10,169	**NIFID #:**	2000066
Total exp.:	**$ 10,169**	**Project #:**	QC 2/00
		Category:	Volunteers
		Sponsor:	QC

This project was sponsored by the Sûreté du Québec and received funding from the New SAR Initiatives Fund (NIF) in fiscal year 2000/2001.

The objective of this project was to increase Quebec's SAR ability by establishing the basis for an administrative and operational ground Search and Rescue (GSAR) structure in Quebec that would place emphasis on the effective and efficient use of volunteer SAR personnel.

In order to accomplish this objective, a Steering Committee was created consisting of volunteers and Sûreté du Quebec GSAR representatives from the ten districts in Québec. The Steering Committee was then tasked to look at various issues surrounding the establishment of a GSAR structure including: the communication structure for all organizations involved; the process of alerting and deploying volunteers; the improvement of existing policies and the creation of new polices affecting training, insurance, and equipment; and the development of a plan of action.

This initiative will aid in the eventual creation of a provincial volunteer ground SAR association and will assist in the development of national training standards.

Deliverables

- Steering Committee

For more information, please contact:
National Search and Rescue Secretariat
Mary Thomas- Federal Coordination
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Tel.: 613-996-2782
1-800-727-9414
Fax: 613-996-3746
Email: NIF@nss.gc.ca
Web Site: http://www.nss.gc.ca

Sponsor/Project Manager
Capitaine René Marchand
Sûreté du Québec
1701 rue Parthenais
Montréal, QC H2K 3S7
Tel.: 450-445-1686
Fax: 450-445-1851
Email: rene.marchand@surete.qc.ca

Conclusion

During fiscal year 2000/2001, 89 projects (51 new, 38 continuing) received funding from the New SAR Initiatives Fund (NIF). The NIF projects ranged in value from less than $5,000 to almost a million dollars per project, and from one year to three years in length.

In 2000/2001, NIF Audits were conducted on the following nine projects:

- DFO 23/97 - West Coast VHF Digital Selective Calling
- DND 2/93 - Eagle Night Vision Goggles for SAR Techs
- EC 8/97 - AWOS Installation South Coast Newfoundland
- MB 2/97 - Near Miss – Positive Lost Person Behavior
- DFO 2/96 - North of 60° SAR Prevention Training Manual
- EC 2/96 - In-flight Detection of Hazardous Icing
- DFO 2/98 - Public Boating Safety Education, NF
- CH 6/97 - Training in Boating Self Rescue
- DFO 3/96 - Safety Campaign: Personal Watercraft Operators

For recommendations and management responses to the NIF audits, please contact the NSS Resource Centre (1-800-727-9414) or visit the NSS web site at www.nss.gc.ca

The fiscal year 2000/2001 NIF Final Summary Report demonstrates that through horizontal management and national cooperation, thirty-five (35) initiatives were completed in fiscal year 2000/2001, contributing to a more effective and efficient National Search and Rescue Program. From high-tech research and development projects, to various SAR prevention programs, to the support of local volunteer SAR groups, the New SAR Initiatives Fund continues to support SAR nationwide and helps to provide the resources necessary to prevent SAR incidences from occurring, and save lives in the event that an incident does occur.

The National Search and Rescue Secretariat would like to thank those who have participated in the program. It is through the continued cooperation and partnership between the NSS, NIF sponsors, and NIF Project Managers that the NIF continues to benefit SAR and its providers throughout Canada.